UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,407	01/11/2002	Dennis M. Hilton	621P001	8920

7590 01/30/2009

Kevin S. Lemack
Nields & Lemack
176 E. Main Street
Westboro, MA 01581

EXAMINER	
TOOMER, CEPHIA D	
ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
01/30/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DENNIS M. HILTON, MICHAEL D. MORGAN,
MICHAEL WINDSOR SYMONS, and
TIMOTHY MICHAEL SYMONS

Appeal 2008-5865
Application 10/044,407
Technology Center 1700

Decided: January 30, 2009

Before EDWARD C. KIMLIN, JEFFREY T. SMITH, and
KAREN M. HASTINGS, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1, 5-8, 10, and 11. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

I. BACKGROUND

The invention relates to a method of producing hydraulic binder foam. The method comprises forming the foam by introducing air into a slurry in a length of a hose to create turbulence and mechanically form a foam. Claim 1 is illustrative of the subject matter on appeal:

> 1. A method of producing a hydraulic binder foam, said method comprising:
>
> forming a slurry comprising gypsum, polyvinyl alcohol as a stabilizing agent and water; conveying said slurry to a length of hose;
>
> introducing an amount of gas into said slurry in said length of hose at a flow rate and pressure sufficient to cause said slurry to foam and to convey said foam through said length of hose.

The claims on appeal have been rejected as follows:

1. Claims 1, 5, and 6 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Chao, U.S. Patent No. 5,109,030, issued April 28, 1992, in view of Kurilov[1], SU 1743887, published June 30, 1992.
2. Claims 7, 8, 10, and 11 stand rejected under 35 U.S.C § 103(a) as unpatentable over Chao, in view of Kurilov, further in view of Nebesnak, U.S. Patent No. 6,475,275, issued November 5, 2002.

We have thoroughly reviewed each of Appellants' arguments for patentability.[2] However, we are in complete agreement with the Examiner

[1] We refer to the English-language translation of this document that is provided in the record.

that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejections.

The issue presented is: Did Appellants identify reversible error in the Examiner's rejection of claims 1, 5 and 6 under § 103? We answer this question in the negative.

A claimed invention is unpatentable if the differences between it and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1739 (2007). The question to be asked is "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.*

The Examiner finds that Chao describes a method of producing hydraulic binder foam. (Ans. 3-4). Chao discloses the foam composition may be prepared by any known method. (Chao, col. 6, ll. 33-37). Chao exemplifies the formation of the hydraulic binder foam by forming a preformed foam (component one) a cement slurry (component two). After formation of the two separate components, component one was added to component two wherein the final foam composition was formed. (Chao, col. 13). The Examiner found that Kurilov describes a method of preparing

---

[2] Appellants' arguments (and, therefore, our analysis) focus on independent claim 1. When addressing the rejection of claims 7, 8, 10 and 11, Appellants have not provided separate arguments addressed to these specific claims.

foam wherein a foam forming solution and compressed air are combined in the mixing chamber sleeve (i.e. hose). (Kurilov, pages 1-2). The Examiner properly determined that a person of ordinary skill in the art would have found it obvious to utilize a sleeve mixing chamber for forming the foam compositions of Chao. (Ans. 4).

Appellants have not disputed the Examiner's findings. Appellants acknowledge that Chao discloses the foam composition can be prepared by chemically or mechanically foaming. (App. Br. 6). However, Appellants contend that Chao does not enable how such a foaming operation would have been carried out. (App. Br. 6). Appellants acknowledge that Kurilov describes a device for preparing foam wherein the foam mixing chamber comprises vortex forming elements. (App. Br. 7). Appellants contend that a person of ordinary skill the art would not have combined the teachings of Chao and Kurilov because the combination would result in failure. Specifically Appellants contend that Kurilov requires the foam mixture to pass through a screen to disperse the mixture. (App. Br. 7).

Appellants' arguments are not persuasive. As set forth above and acknowledged by Appellants, Chao discloses that the foam composition can be formed by any known methods. Kurilov describes a known method for producing foam that employs a tubular sleeve comprising vortex elements wherein the foam composition and air are combined to form a foam that travels through the mixing chamber to a foam conduit. (Kurilov, page 2). Appellants' arguments regarding the screen of Kurilov are not persuasive. Kurilov discloses the screen is designed to allow the foam to pass therethrough. A person of ordinary skill in the art would have reasonably expected that the formation of the foam of Chao would have also been able

to pass through the screen to a foam conduit. Appellants have not directed us to evidence that exemplifies the size of the screen mesh would not have been suitable for the foam composition of Chao. Moreover, person of ordinary skill in the art would have had sufficient skill to select the appropriate size screen for dispersing the foam compositions passing therethrough.

Under the circumstances recounted above, it is our determination that the applied reference evidence establishes a prima facie case of obviousness within the meaning of 35 U.S.C. § 103. Because the Examiner has carried his burden of establishing a prima facie case of obviousness and because the Appellants have offered evidence of nonobviousness, we must now consider anew the issue of obviousness with due regard for all evidence relevant to the ultimate conclusion. *In re Rinehart*, 531 F.2d 1048, 1052 (CCPA 1976).

In support of their nonobviousness position, Appellants proffer a declaration under 37 C.F.R. § 1.132 by Dennis M. Hilton submitted to the application record on September 29, 2004.

According to Appellants (App. Br. 9), the Hilton declaration demonstrates that the density achieved by spray applying a foam of the present invention was unexpectedly much less than the foam produced by spray applying the foam in accordance with Chao. Appellants further state that "the results of record demonstrate to the skilled artisan that it is the method of the present invention, not the amount of the components, that results in the surprising and unexpected results (App. Br. 9),

The Hilton declaration has been considered. Contrary to Appellants' statements the Declaration is silent as to the claimed method providing surprising and unexpected results. The Declarant purportedly prepares a

foam composition utilizing a prefoam process such as described in Chao. (Declaration ¶ 1). However, the process described in the declaration is not the same as described in column 13 of Chao. Specifically, Chao discloses the prefoam composition is added to the hydraulic material component. However, according to Declaration ¶ 1, the hydraulic material is added to the prefoam material. The Declaration is silent to the issue of whether it would have been obvious to utilize the mixing chamber of Kurilov for the formation of Chao's foam composition. For the foregoing reasons, the Declaration is insufficient to refute the Examiner's obviousness determination.

Claims 7, 8, 10, and 11 stand rejected under 35 U.S.C § 103(a) as unpatentable over Chao, in view of Kurilov, further in view of Nebesnak.

Appellants have only presented arguments as to independent claim 1 (rejection discussed above) and have not otherwise presented separate arguments on the merits for claims 7, 8, 10, and 11. In this regard, Appellants do not assert non-obviousness based on the additional limitations set forth in any of the claims 7, 8, 10, and 11 subject to this rejection by explaining how the additional reference applied thereto by the Examiner fails to establish the obviousness of the additional features recited in these separately rejected dependent claims. (App. Br. 10). Because we do not find Appellants' arguments persuasive as to independent claim 1, it follows that these arguments also are unpersuasive as to claims7, 8, 10, and 11

Conclusions of Law

For the above stated reasons, Appellants have failed to show error in the Examiner's conclusion that it would have been prima facie obviousness to utilize a sleeve mixing chamber for forming the foam compositions of

Chao and have failed to present evidence of nonobviousness which outweighs the Examiner's reference evidence of obviousness.

Therefore, we sustain each of the § 103 rejections advanced by the Examiner in this appeal.

Order

We affirm the decision of the Examiner.

No time period for taking any subsequent action in connection with this appeal maybe extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

tc/cam

KEVIN S. LEMACK
NIELDS & LEMACK
176 E. MAIN STREET
WESTBORO, MA 01581